Geology of the Nepal Himalaya

Regional Perspective of the Classic Collided Orogen

As part of the Nepal Himalaya, where most structures were recognized and new concepts were developed, the centrally located Nepal Himalaya is ideally suited for research on Himalayan geology. This book deals with the geology of the whole Himalayan range of Nepal, i.e., from the Gangetic plain in the south to the Tethyan zone in the north. Without a comprehensive look at the various Himalayan zones, it is practically impossible to fully grasp the processes at work behind the formation and development of the spectacular Himalaya. However, the goal is not merely to document all the scientific ontology but rather to reveal a sound basis for the prevailing concepts.

Both the early literature on Himalayan geology and contemporary trends are fully covered. For the first time, the origin, use, and abuse of common Himalayan geological terms such as the Siwaliks, Lesser Himalaya, Main Boundary Thrust, Main Central Thrust, and Tethys are discussed. The book will help readers to progress from a cognitive approach to a constructive one by linking various types of knowledge, such as seeking relations between various geological structures as well as between earlier thoughts or views and contemporary approaches.

Features
- Comprehensively covers the classic continent-continent collision zone at the very heart of the Himalaya
- Detailed regional descriptions with geological maps and cross-sections
- New geological observations will motivate readers to carry out further research on diverse aspects of Himalayan geology

Fields of interest
Geology; Structural Geology

Target groups
Research

Product category
Monograph

Due June 2014

2014. 400 p. 150 illus., 50 in color. (Regional Geology Reviews) Hardcover
► approx. *€ (D) 139.09 | € (A) 142.99 | sFr 173.50
► € 129,99 | £117.00
ISBN 978-3-319-02495-0

Percolation Theory for Flow in Porous Media

This monograph presents, for the first time, a unified and comprehensive introduction to some of the basic transport properties of porous media, such as electrical and hydraulic conductivity, air permeability and diffusion. The approach is based on critical path analysis and the scaling of transport properties, which are individually described as functions of saturation.

Features
- Introduces a new approach to compute basic transport properties of porous media, such as electrical and hydraulic conductivity, air permeability and diffusion
- Authored by leading specialists in the field
- Self-contained and tutorial presentation

Contents

Fields of interest
Hydrogeology; Statistical Physics, Dynamical Systems and Complexity; Geoengineering, Foundations, Hydraulics

Target groups
Research

Product category
Monograph

Due February 2014

3rd ed. 2014. XX, 400 p. 188 illus., 15 in color. (Lecture Notes in Physics, Volume 880) Softcover
► *€ (D) 74.89 | € (A) 76.99 | sFr 93.50
► € 69.99 | £62.99
ISBN 978-3-319-03770-7

Land Use and Land Cover Mapping in Europe

Practices & Trends

Contents
Remote Sensing in support of the geo-information in Europe.- Global land cover mapping: Current status and future trends.- The users’ role in the current European land monitoring context.- Towards an European land cover monitoring service and high-resolution layers.- CORINE Land Cover and land cover change products.- European Area Frame Sampling based on Very High Resolution image.- European forest monitoring approaches.- The European Urban Atlas.- A review of modern approaches to classification of remote sensing data.- Recent advances in remote sensing change detection – a review.- Synergies from SAR-optical data fusion for LULC mapping.- Application of object-oriented method for classification of VHR satellite images using rule-based approach and texture measures.- Remote sensing of vegetation for nature conservation.- Modeling urban sprawl.- Land Information System Austria (LISA).- Digital Land Cover Model for Germany DLM DE – The "German Way".- Land Use & land cover mapping in Europe. Examples from the UK.- Operational land cover and land use mapping in the Netherlands.- The use of the Land-Cover Classification System in Eastern European countries: experiences, lessons learnt and the way forward.- Differentiation of Crop Types and Grassland by Multi-Scale Analysis of Seasonal Satellite Data.- Enhancing remotely sensed low resolution vegetation data for assessing Mediterranean areas prone to land degradation. [...]
**N. Noffke**, Old Dominion University, Norfolk, USA

**Introduction to Geobiology**

This book is an introductionary overview on the novel and rapidly evolving scientific discipline geobiology. Geobiology studies Earth from both geological and biological perspective. This book covers the many facets of this research field, and underlines its potential for the exploration of the definition of life, the co-evolution of life and Earth, the appreciation of global environmental problems, and the detection of life in the universe. This book may serve the advanced reader as compass for future studies, and as guideline for instruction.

**Features**
- The book helps geoscientists to use modern life and its interaction with modern Earth as model to decipher the history of Earth
- Scientists learn to see life as part of Earth, and Earth as sensitive system that changes with its biosphere
- The book covers geobiology topics currently intensively debated in the scientific community

**Contents**
- Definition of Life
- Early Worlds of Earth
- Earth’s Rocks Change: the Significance of Biominerals
- The Breath of Earth: The First Multicellular Organisms
- Life as Architect: The Invention of Shells
- Rise and Decline of Superorganisms
- Shaping Earth for Human Habitation
- Biotechnology: Blessing or Curse?
- Universal Life

**Fields of interest**
- Paleontology
- Sedimentology
- Microbiology

**Target groups**
- Research

**Product category**
- Monograph

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**G. Ohring, COLLEGE PARK, MD, USA (Ed)**

**Climate Change in North America**

This book describes thoroughly the North American Climate of the past 65 million years, with special emphasis on the last 21,000 years, as revealed by paleoclimatic observations and climate models. It analyzes weather observations over the past century to develop a picture of more recent climatic trends. It aims to explain how global climate models are used to simulate and project climate and presents the application of these models to reproduce recent climate variations and predict future North American climate.

**Features**
- Describes the North American Climate over the past 65 million years, with special emphasis on the last 21,000 years
- Analyzes weather observations over the past century to develop a picture of more recent climatic trends
- Focuses on the issue of modeling regional climates

**Contents**
- Introduction
- Paleoclimate
- Current Climate and Recent Trends
- Satellite Observations of North American Climate Change
- Global Climate Model Simulations of North America
- Downscaling of Climate Information
- Detection and Attribution of Climate Change in North America

**Fields of interest**
- Atmospheric Sciences
- Climate Change
- Physical Geography

**Target groups**
- Research

**Product category**
- Monograph

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**T. Radziejewska**, University of Szczecin Faculty of Geosciences, Szczecin, Poland

**Meiobenthos in the Subequatorial Pacific Abyss**

**A Proxy in Anthropogenic Impact Evaluation**

Against the backdrop of the environmental setting of the subequatorial NE Pacific abyssal plain, the book will characterise the meiobenthos as an ecological category in the deep sea and introduce research lines meiobenthic studies are applied to, including environmental assessments of human-induced disturbance of the deep seafloor. It will proceed to present an overview of the current knowledge on the meiobenthos of the area of concern and will discuss general considerations regarding the use of meiobenthos as indicator of seafloor disturbance.

**Features**
- Provides information on the status of knowledge of metazoan meiobenthos in a deep-sea area intended for commercial mining
- Summarises current ideas on applying meiobenthic research to environmental impact assessment in the deep sea
- Provides an overview of field studies / experiments aimed at assessing effects of simulated mining activities in the deep sea

**Contents**
- Characteristics of the North-Eastern Pacific’s abyss, with a particular reference to the Clarion-Clipperton Fracture Zone (CCFZ)
- Meiobenthos of the subequatorial Pacific abyssal seafloor: a synopsis
- Abyssal subequatorial NE Pacific meiobenthic communities in the assessment of anthropogenic seafloor disturbance

**Fields of interest**
- Oceanography
- Biogeosciences
- Marine & Freshwater Sciences

**Target groups**
- Research

**Product category**
- Brief

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**Due April 2014**

2014. 175 p. 150 illus., 30 in color. Hardcover
- approx. *€ (D) 106,95 | € (A) 109,95 | sFr 143,50
- approx. *€ 99,95 | £90.00
ISBN 978-3-642-25061-3

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**Due January 2014**

2014. XII, 286 p. 86 illus. (Regional Climate Studies) Hardcover
- *€ (D) 106,99 | € (A) 109,99 | sFr 133,50
- *€ 99,99 | £90.00
ISBN 978-3-319-03767-7

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**Due June 2014**

2014. 100 p. 25 illus., 5 in color. (SpringerBriefs in Earth System Sciences) Softcover
- *€ (D) 53,45 | € (A) 54,95 | sFr 66,50
- *€ 49,95 | £44.99
ISBN 978-3-642-41457-2

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The weathering of historical buildings and, indeed, of monuments and sculptures of natural stone is a problem that has been encountered for hundreds of years. However, a dramatic increase in deterioration in the structure of our built heritage has been observed during the past century. To understand the complex interaction that the stone in a building suffers with its near environment (the building) and the macro environment (the local climate and atmospheric conditions) requires an interdisciplinary approach and the application of many disciplines. Climate change over the next 100 years is likely to have a range of direct and indirect impacts on many natural and physical environments, including the built environment. The protection of our architectural heritage has both cultural and historical importance, as well as substantial economic and ecological value.

Features
- Intensively revised 5th edition
- Numerous drawings and color photographs
- Updated, complete guide to building stone deterioration processes and preservation techniques

Contents

Fields of interest
Structural Geology; Geotechnical Engineering & Applied Earth Sciences; Building Materials

Product category
Monograph

Due February 2014
5th ed. 2014. 580 p. 490 illus., 360 in color. Hardcover
- *€ (D) 181,89 | € (A) 186,99 | sFr 226,50
- € 169,99 | £153.00
ISBN 978-3-642-45154-6

Tsunamis on the Pacific Coast of Canada
From Prehistoric Time to the Present
Tsunamis are among the world's most dangerous and destructive natural phenomena. The catastrophic tsunami of December 26, 2004 claimed over 300000 lives.

Features
- Unique historical tsunami data set for almost tsunami-unknown region in the Pacific Ocean
- Spectacular examples of several historical events
- Detailed analysis of the unique 1975 Kitimat landslide-generated tsunami
- Numerical modelling of historical and potential landslide-generated tsunamis
- High-quality instrumentation and modern methods of data analysis that enabled to identify and examine in the Canada records several local and distant tsunamis

Contents

Fields of interest
Oceanography; Measurement Science and Instrumentation; Engineering Fluid Dynamics

Product category
Monograph

Due May 2014
- *€ (D) 106,95 | € (A) 109,95 | sFr 143,50
- approx. € 99,95 | £90.00
ISBN 978-1-4020-3990-4